Safety Attribute Inspection (SAI) Data Collection Tool 1.2.2 Major Repairs and Alterations Records (AW)

ELEMENT SUMMARY INFORMATION

Purpose of This Element (Certificate Holder's responsibility):

 To ensure that reports of major repairs and major alterations are prepared, submitted, made available for inspection, and transferred in accordance with the applicable Federal Aviation Regulations and the Certificate Holder's manual, and to ensure that a list of current major alterations is kept by the Certificate Holder.

Objective (FAA oversight responsibility):

- To determine if the Certificate Holder's Major Repairs and Alterations Records process meets all applicable requirements of the Federal Aviation Regulations and FAA policies.
- To determine if the Certificate Holder's Major Repairs and Alterations Records process incorporates the System Safety Attributes.
- To identify any shortfalls in the Certificate Holder's Major Repairs and Alterations Records process.

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirement(s) (SRRs):

• SRRs:

121.135(a)(1)

121.135(b)(1)

121.135(b)(2)

121.135(b)(24)

121.135(b)(3)

121.380(a)(2)(vii)

121.380(c)(1)

121.380(c)(3)

121.380a

121.380a(a)

121.380a(b)

121.707(a)

121.707(b)

Related CFR(s) & FAA Policy/Guidance:

• Related CFRs: Intentionally left blank

• FAA Policy/Guidance: FAA Order 8300.10, Volume 2, Chapter 71. FAA order 8300.10, Volume 3, Chapter 42.

SAI SECTION 1 - PROCEDURES ATTRIBUTE

Objective: Procedures, instructions and information contained in Certificate Holder's manual are documented methods for accomplishing a process. Policies contained in the Certificate Holder's manual should establish the Certificate Holder's compliance posture. Policies may not be stand—alone statements but may be imbedded within procedures, instructions or information regarding a particular regulatory requirement. The questions in this section of the data collection tool are designed to assist the inspector in determining if the Certificate Holder's manual has documented or prescribed methods of accomplishing the process requirements that provide answers to the associated who, what, when, where and how type questions. This section of the data collection tool contains policy questions, procedural questions and instructional or informational questions pertaining to various types of Certificate Holder requirements such as actions, prohibitions or resources (i.e., personnel, facilities, equipment, technical data, etc.).

nfo	rmational questions pertaining to various types of Certificate Holder requirements, prohibitions or resources (i.e., personnel, facilities, equipment, technical contents.)	nts such as
Tas	ks	
	To meet this objective, the inspector must accomplish the following tasks:	
1.	Review the information listed in the Supplemental Information section of this cool.	data collection
2.	Review the duties and responsibilities for management and other personnel in Certificate Holder who accomplish the Major Repairs and Alterations Records	
3.	Review the Certificate Holder's manual to ensure that it contains policies, pro instructions and information necessary for the Major Repairs and Alterations process.	·
Que	estions	
	To meet this objective, the inspector must answer the following questions:	
1.		
1.1	Does the Certificate Holder's manual contain general policies for the Major Repairs and Alterations Records process that comply with the specific regulatory requirements? SRRs: 121.135(b)(1); 121.380(a)(2)(vii); 121.707(a); 121.707(b); 121.380a(a)	☐ Yes ☐ No, Explain
1.2	Does the Certificate Holder's manual cite the regulatory requirements listed in the Supplemental Information section of this SAI? SRRs: 121.135(b)(3) Related CFRs: Intentionally left blank	☐ Yes ☐ No, Explain
1.3	Does the Certificate Holder's manual contain the duties and responsibilities for personnel who will accomplish the Major Repairs and Alterations Records process? SRRs: 121.135(b)(2)	☐ Yes □ No, Explain
1.4	Does the Certificate Holder's manual include instructions and information for personnel to meet the requirements of the Major Repairs and Alterations Records process? SRRs: 121.135(a)(1)	☐ Yes □ No, Explain
1.5	Does the Certificate Holder's manual contain instructions which specify that it of current major alterations to each: SRRs: 121.135(b)(24); 121.380(a)(2)(vii)	will keep a list

1.5.1Airframe? SRRs: 121.380(a)(2)(vii)	Yes
Related Design JTIs:	□ No, Explain
 Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each airframe. Sources: 121.135(b)(24); 121.380(a)(2)(vii) Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw 	
1.5.2Engine?	□Yes
SRRs: 121.380(a)(2)(vii)	□ No, Explain
 Related Design JTIs: Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each engine. Sources: 121.135(b)(24); 121.380(a)(2)(vii) Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw 	
1.5.3Propeller? SRRs: 121.380(a)(2)(vii)	□Yes
	□ No, Explain
 Related Design JTIs: Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each propeller. Sources: 121.135(b)(24); 121.380(a)(2)(vii) 	Not Applicable
Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw	ΠV
1.5.4Appliance? SRRs: 121.380(a)(2)(vii)	☐ Yes ☐ No, Explain
Related Design JTIs:	, '
 Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each appliance. Sources: 121.135(b)(24); 121.380(a)(2)(vii) Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw 	
1.6 Does the Certificate Holder's manual contain instructions which specify that it will retain records of current major repairs until the work is repeated or superseded by other work or for one year after the work is performed? SRRs: 121.135(b)(24); 121.380(c)(1)	□ Yes □ No, Explain
Related Design JTIs:	
• Check that the Certificate Holder's manual contains instructions to keep the records of current major repairs to each airframe and shall be retained until the work is repeated or superseded by other work or for one year after the work is performed. Sources: 121.135(b)(24); 121.380(c)(1) Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw	
 Check that the Certificate Holder's manual contains instructions to keep the records of current major repairs to each engine and shall be retained until the work is repeated or superseded by other work or for one year after the work is performed. Sources: 121.135(b)(24); 121.380(c)(1) Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw Check that the Certificate Holder's manual contains instructions to keep 	
the records of current major repairs to each propeller and shall be retained	

	until the work is repeated or superseded by other work or for one year after the work is performed. Sources: 121.135(b)(24); 121.380(c)(1) Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw • Check that the Certificate Holder's manual contains instructions to keep the records of current major repairs to each appliance and shall be retained until the work is repeated or superseded by other work or for one year after the work is performed. Sources: 121.135(b)(24); 121.380(c)(1) Interfaces: 1.3.1-aw; 1.3.14-aw; 1.3.2-aw	
1.7	Does the Certificate Holder's manual contain instructions which specify that it will retain and transfer a list of current major alterations to each airframe, engine, propeller, and appliance with the aircraft at the time the aircraft is sold? SRRs: 121.135(b)(24); 121.380(c)(3)	☐ Yes ☐ No, Explain
	Related Design JTIs: • Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each airframe and shall be retained and transferred at the time the aircraft is sold. Sources: 121.135(b)(24); 121.380(c)(3) Interfaces: 1.3.14-aw	
	 Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each engine and shall be retained and transferred at the time the aircraft is sold. Sources: 121.135(b)(24); 121.380(c)(3) Interfaces: 1.3.14-aw 	
	 Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each propeller and shall be retained and transferred at the time the aircraft is sold. Sources: 121.135(b)(24); 121.380(c)(3) Interfaces: 1.3.14-aw 	
	 Check that the Certificate Holder's manual contains instructions to keep a list of current major alterations to each appliance and shall be retained and transferred at the time the aircraft is sold. Sources: 121.135(b)(24); 121.380(c)(3) Interfaces: 1.3.14-aw 	
1.8	Does the Certificate Holder's manual contain instructions which specify that we sells a U.S. registered aircraft, it will transfer to the purchaser, at the time of set the following records of that aircraft in plain language form or coded form at the election of the purchaser: SRRs: 121.135(b)(24); 121.380a	ale,
1.8.	1A list of current major alterations to each airframe, engine, propeller, and appliance? SRRs: 121.380a(a)	☐ Yes ☐ No, Explain
1.8.	2Records of current major repairs that have not been repeated or superseded by other work or have not exceeded one year after the work was performed? SRRs: 121.380a(b)	☐ Yes ☐ No, Explain
	\ \ /	

1	1.9 Does the Certificate Holder's manual contain instructions which specify that it will promptly prepare a report of each major alteration or major repair of an airframe, aircraft engine, propeller, or appliance of an aircraft that it operates? SRRs: 121.707(a)	□ Yes □ No, Explain
	 Related Design JTIs: Check that the Certificate Holder's manual contains instructions and procedures to promptly upon its completion, prepare a report of each major alteration or major repair of an airframe of an aircraft operated by it. Sources: 121.135(b)(16); 121.707(a) Interfaces: 1.3.14–aw Check that the Certificate Holder's manual contains instructions or 	
	procedures to prepare, promptly upon its completion, a report of each major alteration or major repair of an aircraft engine of an aircraft operated by it. Sources: 121.135(b)(24); 121.707(a) Interfaces: 1.3.14–aw	
	 Check that the Certificate Holder's manual contains instructions or procedures to prepare, promptly upon its completion, a report of each major alteration or major repair of a propeller of an aircraft operated by it. Sources: 121.135(b)(24); 121.707(a) 	
	 Check that the Certificate Holder's manual contains instructions or procedures to prepare, promptly upon its completion, a report of each major alteration or major repair of an appliance of an aircraft operated by it. 	
	Sources: 121.135(b)(24); 121.707(a) Interfaces: 1.3.14-aw	
1	1.10 Does the Certificate Holder's manual contain instructions which specify that it will submit a copy of each report of a major alteration to, and retain a copy of each report for inspection by, the representative of the Administrator who is assigned to it? SRRs: 121.707(b)	□ Yes □ No, Explain
	 Related Design JTIs: Check that the Certificate Holder's manual contains instructions or procedures to submit a copy of each report of a major alteration to the representative of the Administrator who is assigned to it. Sources: 121.135(b)(24); 121.707(b) Interfaces: 1.3.14–aw 	
	 Check that the Certificate Holder's manual contains instructions or procedures to keep a copy of each report of a major repair available for inspection by, the representative of the Administrator who is assigned to it. Sources: 121.135(b)(24); 121.707(b) Interfaces: 1.3.14-aw 	

1.11 Does the Certificate Holder's Major Repairs and Alterations Records process comply with the guidance contained in FAA Order 8300.10?	☐ Yes ☐ No, Explain
 Check that the Certificate Holder's current list of major alterations has the associated item to which the major alteration has been installed. <i>Sources:</i> 8300.10 Airworthiness Handbook (revision 13) Volume 2, Chapter 71, Section 1, Paragraph 7A(6)a <i>Interfaces:</i> 1.3.14–aw; 1.3.9–aw Check that the Certificate Holder's list of major alterations contain a description, or reference to the FAA– approved technical data used to make the major alteration. <i>Sources:</i> 8300.10 Airworthiness Handbook (revision 13) Volume 2, Chapter 71, Section 1, Paragraph 7A(6)b <i>Interfaces:</i> 1.3.14–aw; 1.3.9–aw Check that the Certificate Holder has detailed records of all unscheduled maintenance that has not been superseded by work of equivalent scope and detail for major repairs. <i>Sources:</i> 8300.10 Airworthiness Handbook (revision 13) Volume 2, Chapter 71, Section 1, Paragraph 7A(7)c <i>Interfaces:</i> 1.2.3–aw; 1.3.14–aw Check that the Certificate Holder has a list of major alteration and/or reports of major repairs containing the date of accomplishment. <i>Sources:</i> 8300.10 Airworthiness Handbook (revision 13) Volume 3, Chapter 42, Section 2, Paragraph 5C(9)(b) <i>Interfaces:</i> 1.3.14–aw; 1.3.9–aw Check that the Certificate Holder has a list of major alteration and/or reports of major repairs containing a brief description of the work. <i>Sources:</i> 8300.10 Airworthiness Handbook (revision 13) Volume 3, Chapter 42, Section 2, Paragraph 5C(9)(b) <i>Interfaces:</i> 1.3.14–aw; 1.3.9–aw 	
1.12If alternate procedures exist for use during irregular conditions, do the alternate procedures provide an equivalent level of safety to achieve the same results as the primary procedures?	☐ Yes ☐ No, Explain ☐ Not Applicable

SAI SECTION 1 – PROCEDURES ATTRIBUTE –Drop Down Menu

- 1. No procedures, policy, instructions or information specified.
- 2. Procedures or instructions and information do not identify (who, what, when, where, how).
- 3. Procedures, policy or instructions and information do not comply with CFR.
- 4. Procedures, policy or instructions and information do not comply with FAA policy and guidance.
- 5. Procedures, policy or instructions and information do not comply with other documentation (e.g., manufacturer's data, Jeppesen's Charts, etc.).
- 6. Procedures, policy or instructions and information unclear or incomplete.
- 7. Documentation quality (e.g., unreadable or illegible).
- 8. Procedures, policy or instructions and information inconsistent across Certificate Holder manuals (FOM Flight Operations Manual to GMM General Maintenance Manual, etc.).
- 9. Procedures, policy or instructions and information inconsistent across media (e.g., paper, microfiche, electronic).
- 10. Resource requirements incomplete (personnel, facilities, equipment, technical data).
- 11. Other.

SAI SECTION 2 - CONTROLS ATTRIBUTE

Objective: Controls are checks and restraints designed into a process to ensure a desired result. The questions in this section of the data collection tool are designed to assist the inspector in determining if checks and restraints are designed into the process to ensure the desired result is achieved. Controls should be written into the manual system to ensure that the most important manual policies, procedures or instructions and information will be complied with.

Controls may be in the form of "administrative controls" which are secondary or supplemental written procedures. Like written procedures, administrative controls also need to provide answers to the associated who, what, when, where and how type questions. Controls may also be in the form of "engineered controls" such as automated features or mechanical actions or devices (i.e., safety devices, warning devices, etc.).

be ii	n the form of "engineered controls" such as automated features or mechanical	actions or	
devi	devices (i.e., safety devices, warning devices, etc.).		
Tas	ks		
	To meet this objective, the inspector must accomplish the following tasks:		
1.	Review the control questions below.		
2.	Review the Certificate Holder's policies, procedures, instructions and informa understanding of the controls that it has documented.	tion to gain an	
Que	estions		
	To meet this objective, the inspector must answer the following questions	3:	
2.	Are the following controls built into the Major Repairs and Alterations Records	process:	
2.1	Is there a control in place to ensure that the Certificate Holder promptly	□Yes	
	prepares a report of each major repair and major alteration upon its completion?	□ No, Explain	
2.2	Is there a control in place to ensure that the Certificate Holder submits a	□Yes	
	copy of each report of a major alteration to the representative of the Administrator who is assigned to it?	□ No, Explain	
2.3	Is there a control in place to ensure that the Certificate Holder keeps a	□Yes	
	list of current major alterations to each airframe, engine, propeller, and appliance?	□ No, Explain	
2.4	Is there a control in place to ensure that the Certificate Holder keeps a copy	□Yes	
	of each report of a major repair available for inspection by the representative	□ No, Explain	
	of the Administrator?		
2.5		□ Yes	
	impact of any changes made to the controls in the Major Repairs and	□ No, Explain	
	Alterations Records process?	-	

SAI SECTION 2 – CONTROLS ATTRIBUTE –Drop Down Menu

- 1. No controls specified.
- 2. Documentation for the controls do not identify (who, what, when, where, how).
- 3. Controls incomplete.
- 4. Controls could be circumvented.
- 5. Controls could be unenforceable.
- 6. Resource requirements incomplete (personnel, facilities, equipment, technical data).
- 7. Other.

Repairs and Alterations Records process?

SAI SECTION 3 - PROCESS MEASUREMENT ATTRIBUTE

Objective: Process measurements are used by the Certificate Holder to measure and assess its processes to identify and correct problems or potential problems and to make improvements to the processes. The questions in this section of the data collection tool are designed to assist the inspector in determining if the Certificate Holder measures or assesses information to identify, analyze and document potential problems with the process. Process measurements are basically a Certificate Holder's internal evaluation or auditing of the most important policies, procedures or instructions and information associated with an element.

To prevent the duplication of work that would otherwise occur, Process Measurements are most commonly addressed through a combination of auditing features contained in both the Certificate Holder's Safety Program/Internal Evaluation Program (for Operations and Cabin Safety related issues) and the auditing function of the Continuous Analysis &Surveillance System (for Airworthiness or Maintenance/Inspection related issues). The Director of Safety and the Quality Assurance Department often work in conjunction to accomplish this function for the Certificate Holder. This approach simply requires amendment of the Safety Program/Internal Evaluation Program audit forms or checklists and the Continuous Analysis &Surveillance System audit forms or checklists to include the specific process measurements for each element.

Tas	ks	
	To meet this objective, the inspector must accomplish the following tasks:	
1.	Review the process measurement questions below.	
2.	Review the Certificate Holder's policies, procedures, instructions and information gain an understanding of the process measurements that it has documented	
Qu	estions	
	To meet this objective, the inspector must answer the following questions:	
3.	Does the Certificate Holder's Major Repairs and Alterations Records process include the following process measurements:	
3.1		☐ Yes ☐ No, Explain
3.2	Process measurements that would reveal when the Certificate Holder failed to submit a copy of each report of a major alteration to the representative of the Administrator who is assigned to it?	☐ Yes ☐ No, Explain
3.3	Process measurements that would reveal when the Certificate Holder failed to keep a list of current major alterations to each airframe, engine, propeller, and appliance?	☐ Yes ☐ No, Explain
3.4	Process measurements that would reveal when the Certificate Holder failed to keep a report for each major repair available for inspection by the representative of the Administrator?	☐ Yes ☐ No, Explain
3.5	Does the Certificate Holder document its process measurement methods and results?	☐ Yes ☐ No, Explain
3.6	Does the organization that conducts the process measurements have direct access to the person with responsibility for the Major	☐ Yes ☐ No, Explain

SAI SECTION 3 – PROCESS MEASUREMENT ATTRIBUTE –Drop Down Menu

- 1. No process measurements specified.
- 2. Documentation for the process measurements does not identify (who, what, when, where, how).
- 3. Inability to identify negative findings.
- 4. No provisions for implementing corrective actions.
- 5. Ineffective follow-up to determine effectiveness of corrective actions.
- 6. Resources requirements (personnel, facilities, equipment, technical data).
- 7. Other.

SAI SECTION 4 - INTERFACES ATTRIBUTE

Objective: Interfaces are used by the Certificate Holder to identify and manage the interactions between processes. The questions in this section of the data collection tool are designed to assist the inspector in determining whether or not interactions between the procedures, policies or instructions and information associated with other independent processes within the Certificate Holder's organization are documented. Written procedures, policies or instructions and information that are interrelated and located in different manuals within the Certificate Holder's manual system need to be consistent and complement each other. For the interfaces to be effectively managed, it is not only important to identify what the interfaces are, but it is imperative to document the specific location of the interfaces within the Certificate Holder's manual system.

Tasks

To meet this objective, the inspector must accomplish the following tasks:

- Review the interfaces associated with the Major Repairs and Alterations Records process that have been identified along with the individual questions in the Procedures Section (1) of this data collection tool.
- Review the Certificate Holder's policies, procedures, instructions and information to gain an understanding of the interfaces that it has documented.

Questions

To meet this objective, the inspector must answer the following questions:

NOTE: ALL EXPLANATIONS IN THE DROP DOWN MENU FOR "NO" ANSWERS MUST INCLUDE THE INDIVIDUAL QUESTION NUMBER FROM THE PROCEDURES SECTION (1) OF THIS DATA COLLECTION TOOL AND THE ELEMENT NUMBER(S) OF THE INTERFACE(S) THAT WERE NOT ADDRESSED.

- 4. Does the Certificate Holder's manual:
- 4.1 Properly address the interfaces that are identified along with the individual questions in the Procedures Section (1)?
 4.2 Document a method for assessing the impact of any changes to the associated interfaces within the Major Repairs and Alterations Records process?
- 4.3 List additional interfaces identified during the accomplishment of this SAI.

SAI SECTION 4 – INTERFACES ATTRIBUTE –Drop Down Menu

- 1. No interfaces specified.
- 2. The following interfaces not identified within the Certificate Holder's manual system:
- 3. Interfaces listed are inaccurate.
- 4. Specific location of interfaces not identified within the manual system.
- 5. Other

SAI SECTION 5 - MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE

Objective: The questions in this section of the data collection tool address the responsibility and authority of the process. They are designed to assist the inspector in determining if there is a

ans	orly identifiable, qualified and knowledgeable person who is responsible for the werable for the quality of the process and has the authority to establish and modess. (The person with the authority may or may not be the person with the re	nodify the
Tas		7 /
	To meet this objective, the inspector must accomplish the following tasks:	
1.	Identify the person who has overall responsibility for the Major Repairs and Alterations Records process.	
2.	Identify the person who has overall authority for the Major Repairs and Alteraprocess.	ations Records
3.	Review the duties and responsibilities of the person(s), documented in the C Holder's manual.	ertificate
4.	Review the appropriate organizational chart.	
Que	estions	
	To meet this objective, the inspector must answer the following questions:	
5.	Are the following aspects of the Management Responsibility and Authority At addressed in the Major Repairs and Alterations Records process:	ttributes
5.1	Does the Certificate Holder's manual clearly identify who is responsible for the quality of the Major Repairs and Alterations Records process?	☐ Yes ☐ No, Explain Name/Title:
5.2	Does the Certificate Holder's manual clearly identify who has authority to establish and modify the policies, procedures, instructions and information for the Major Repairs and Alterations Records process?	☐ Yes ☐ No, Explain Name/Title:
5.3	Does the Certificate Holder's manual include the duties and responsibilities of those who manage the work required by the Major Repairs and Alterations Records process? SRRs: 121.135(b)(2)	☐ Yes ☐ No, Explain
5.4	Does the Certificate Holder's manual include instructions and information for those who manage the work required by the Major Repairs and Alterations Records process? SRRs: 121.135(a)(1)	☐ Yes ☐ No, Explain
5.5	Does the Certificate Holder's manual clearly and completely document the authority for this position?	□ Yes □ No, Explain
5.6	Does the Certificate Holder's manual clearly and completely document their qualification standards for the person having responsibility for the Major Repairs and Alterations Records process?	☐ Yes ☐ No, Explain
5.7	Does the Certificate Holder's manual clearly and completely document their qualification standards for the person having authority to establish and modify the Certificate Holder's policies, procedures, instructions and information for the Major Repairs and Alterations	□ Yes □ No, Explain

,	5.8	Does the Certificate Holder's manual clearly and completely	□ Yes
		document the procedures for delegation of authority for the Major	□ No, Explain
		Repairs and Alterations Records process?	- No, Explain

4. Other.

SAI SECTION 5 - MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTE -Drop Down Menu 1. Not documented. 2. Documentation unclear. 3. Documentation incomplete.